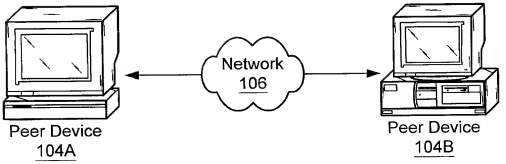

FIG. 1A

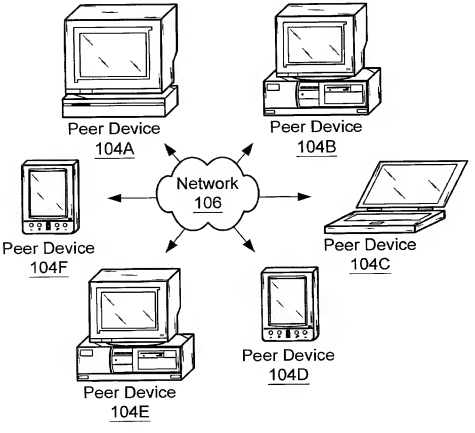

FIG. 1B

20220216.9155501

2022TD 64955001

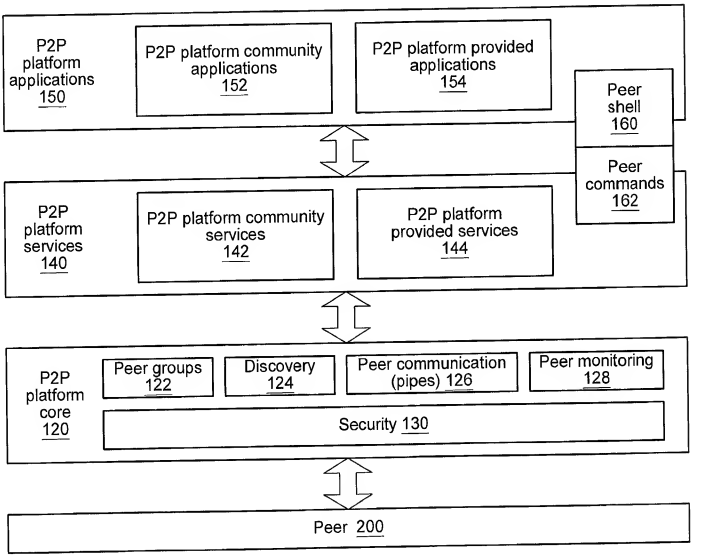

FIG. 2

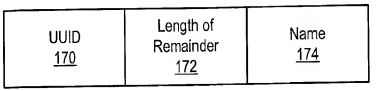
UUID
170
Length of
Remainder
172
Name
174

FIG. 3

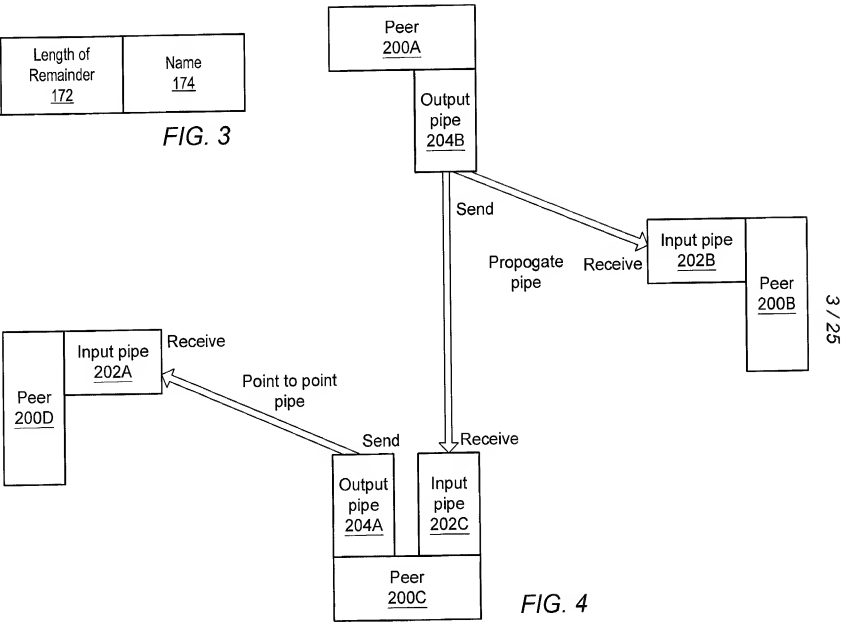
Peer
200A
Output
pipe
204B
Send
Propogate
pipe
Receive
Input pipe
202B
Peer
200B
Input pipe
202A
Receive
Peer
200D
Point to point
pipe
Send
Receive
Output
pipe
204A
Input
pipe
202C
Peer
200C

FIG. 4

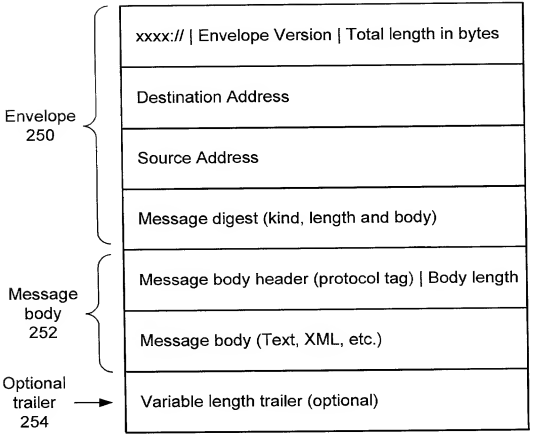
xxxx:// | Envelope Version | Total length in bytes
Destination Address
Source Address
Message digest (kind, length and body)
Message body header (protocol tag) | Body length
Message body (Text, XML, etc.)
Variable length trailer (optional)
Envelope 250
Message body 252
Optional trailer 254

FIG. 5

Element Name (A String)	Element Value Type
Name	<String>
Keywords	<String>
Properties	<Properties>
Service	<Service Advertisement[]> (an array)
Endpoint	<Endpoint Advertisement[]> (an array)

FIG. 6

Element Name (A String)	Element Value Type
Name	<String>
Keywords	<String>
GroupID	<ID>
PeerID	<ID>
Service	<Service Advertisement[]> (an array)

FIG. 7

Element Name (A String)	Element Value Type
Name	<String>
Identifier	<ID>
Type	<String>

FIG. 8

Element Name (A String)	Element Value Type
Name	<String>
Keywords	<String>
Identifier	<ID>
Version	<String>
Pipe	<PipeAdvertisement>
Params	<String>
URI	<String>
Provider	<String>
Access Method	<Method[]> (an array)

FIG. 9

Element Name (A String)	Element Value Type
Mime-Type (Optional)	<String>
Size	Long
Encoding	<String>
ContentID	<ID>
RefID (Optional)	<ID>
Document	<Document>

FIG. 10

Element Name (A String)	Element Value Type
Name	<String>
Keywords	<String>
Address	<String>
Transport	<Transport Advertisement>

FIG. 11

20210165905

20220704.6495501

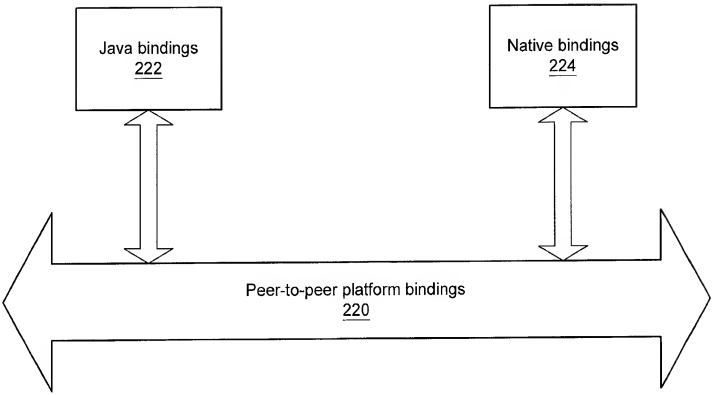

FIG. 12

20220707.6459600T

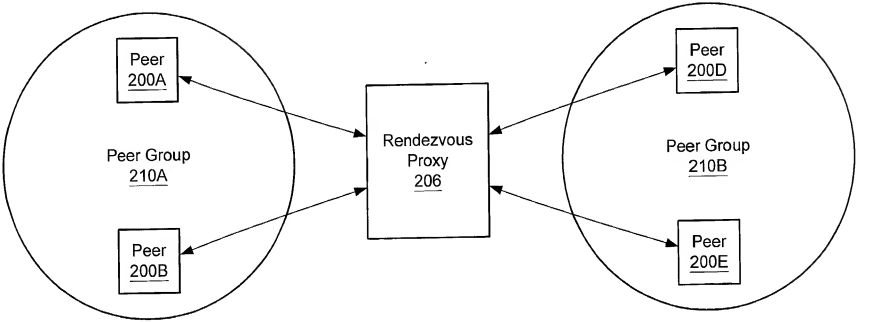

FIG. 13

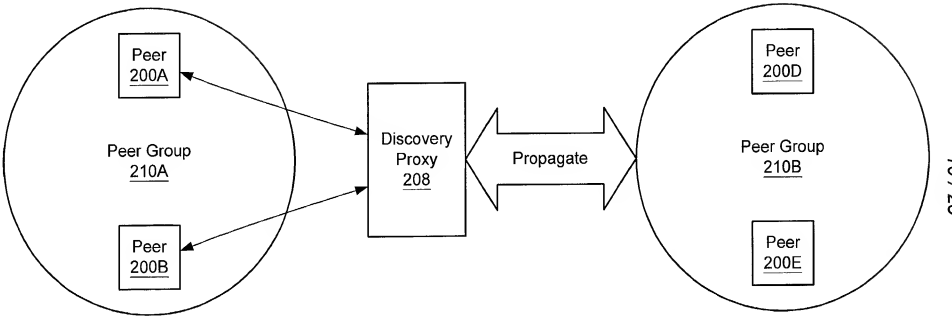
Peer
200A
Peer Group
210A
Peer
200B
Discovery
Proxy
208
Propagate
Peer
200D
Peer Group
210B
Peer
200E

FIG. 14

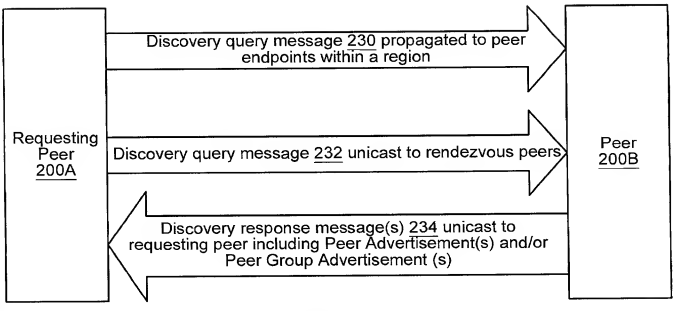

FIG. 15

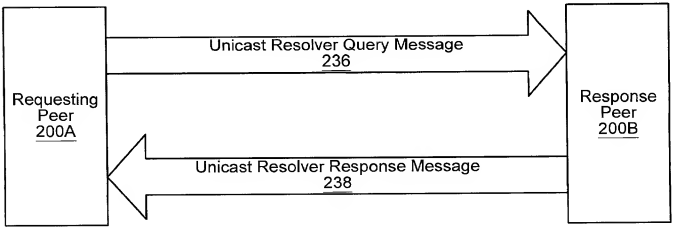

FIG. 16

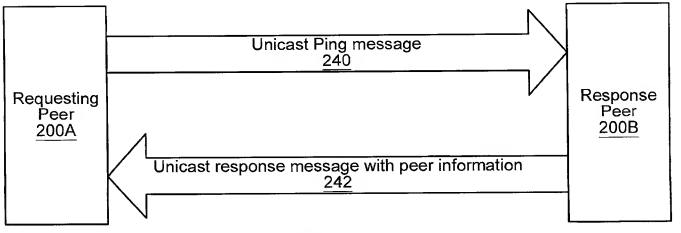

FIG. 17

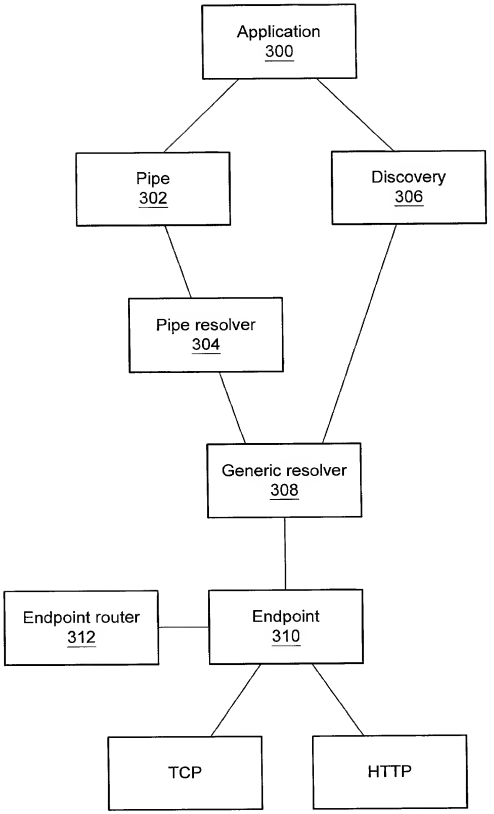
Application
300
Pipe
302
Discovery
306
Pipe resolver
304
Generic resolver
308
Endpoint router
312
Endpoint
310
TCP
HTTP

FIG. 18

2022/0169589

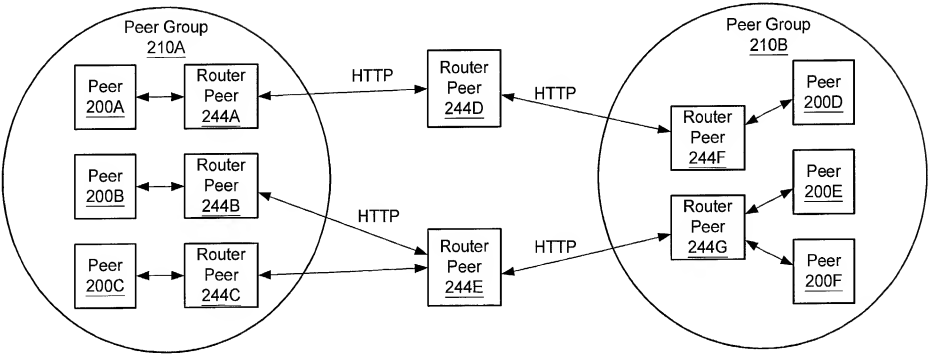

FIG. 19

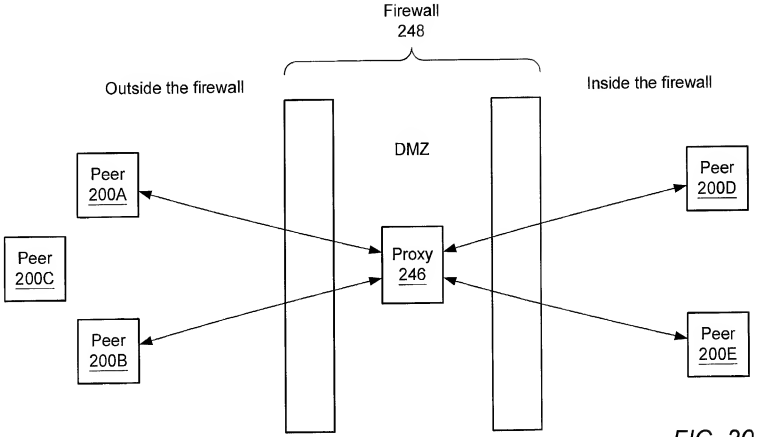
Firewall
248
Outside the firewall
Inside the firewall
DMZ
Peer
200A
Peer
200C
Peer
200B
Proxy
246
Peer
200D
Peer
200E

FIG. 20

20221016955001

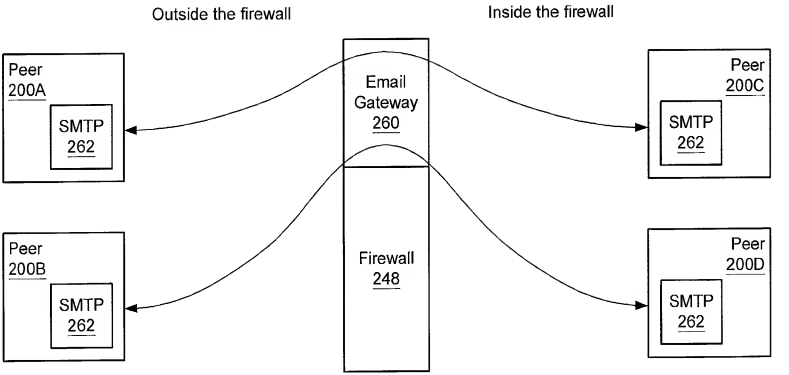

FIG. 21

20220°6h955001

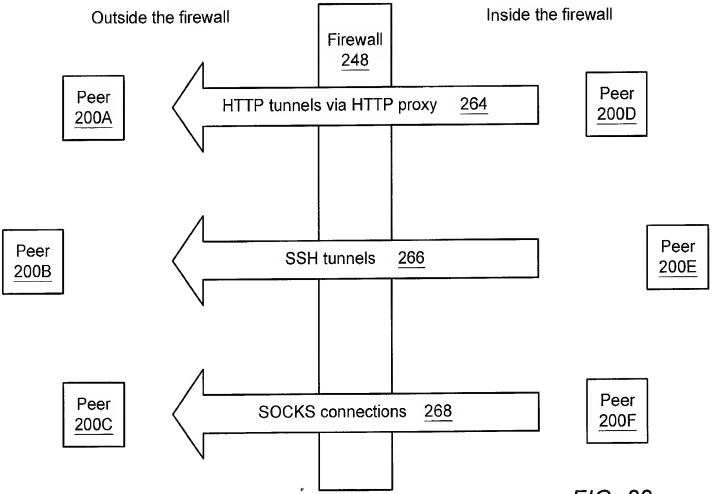

FIG. 22

20220706495500T

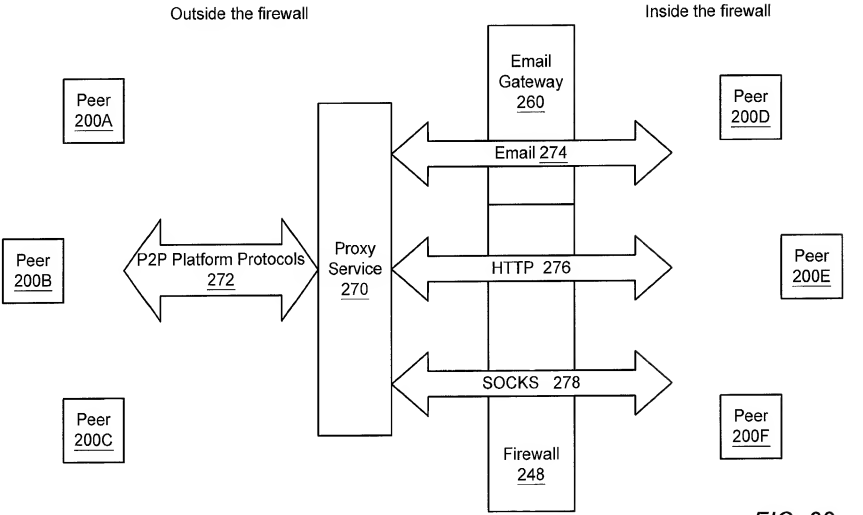

FIG. 23

20220106955001

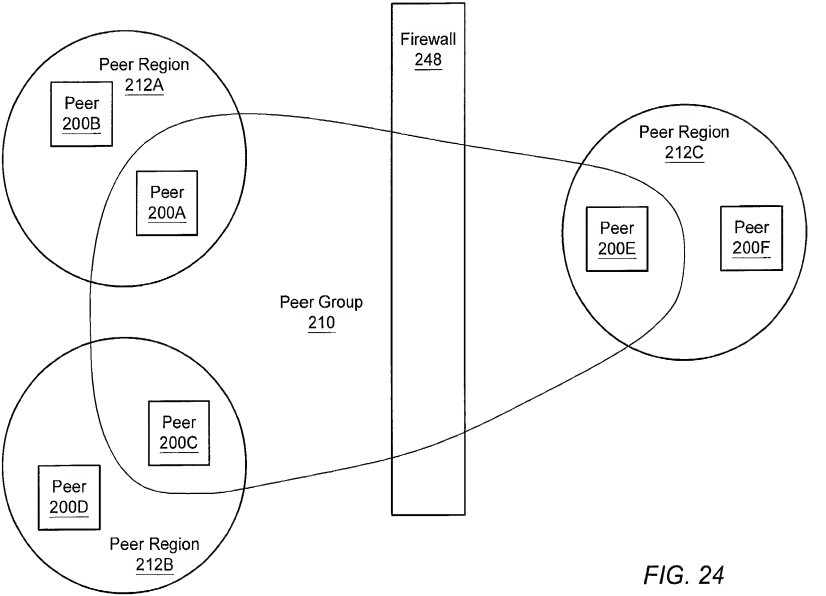

FIG. 24

2022TO' 6h955001

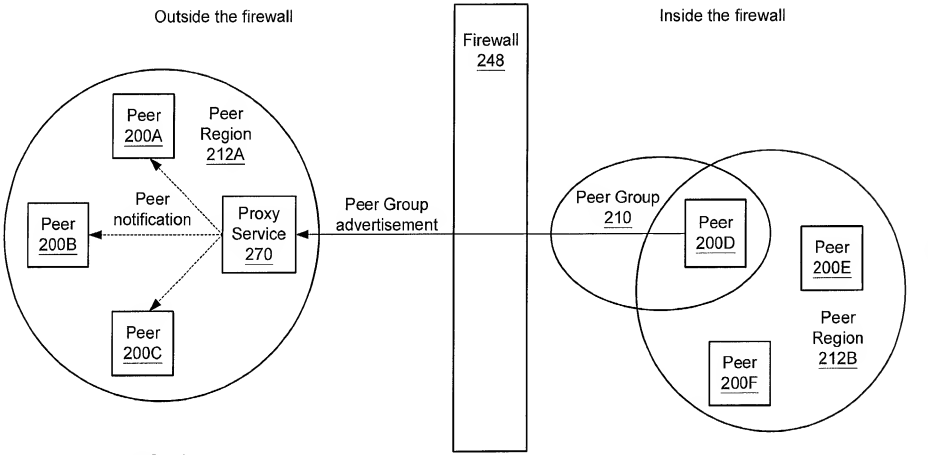

FIG. 25

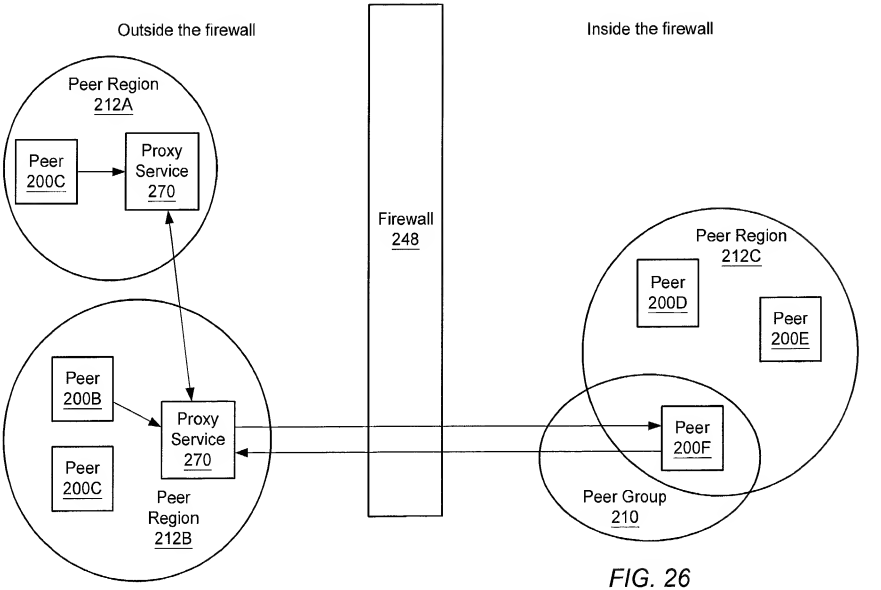
Outside the firewall
Inside the firewall
Peer Region
212A
Peer
200C
Proxy
Service
270
Firewall
248
Peer Region
212C
Peer
200D
Peer
200E
Peer
200B
Proxy
Service
270
Peer
200C
Peer
Region
212B
Peer
200F
Peer Group
210

FIG. 26

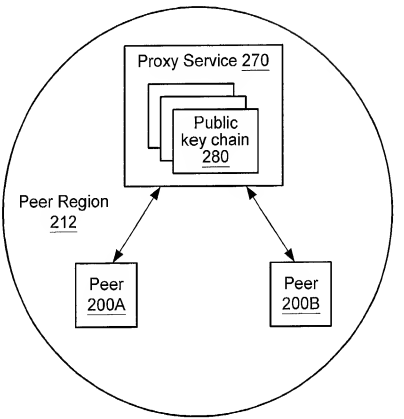

FIG. 27A

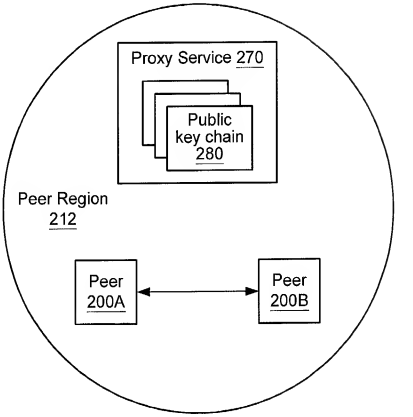

FIG. 27B

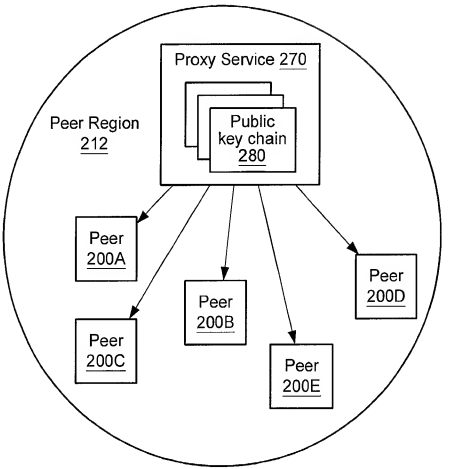

FIG. 28A

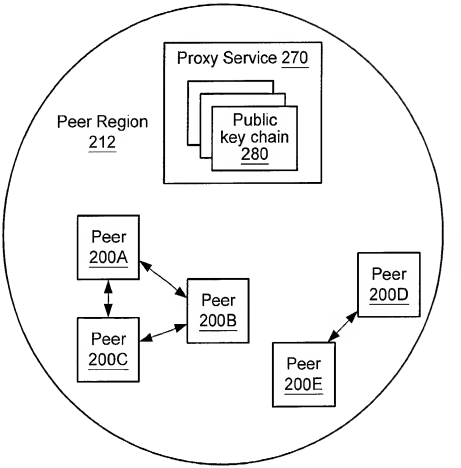

FIG. 28B

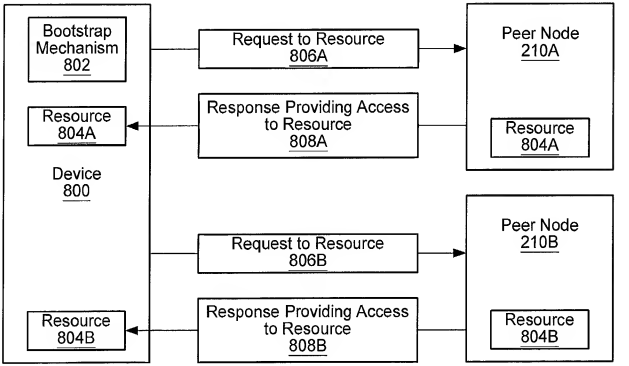
Bootstrap Mechanism 802
Resource 804A
Device 800
Resource 804B
Request to Resource 806A
Response Providing Access to Resource 808A
Request to Resource 806B
Response Providing Access to Resource 808B
Peer Node 210A
Resource 804A
Peer Node 210B
Resource 804B

FIG. 29

20220106.1005564

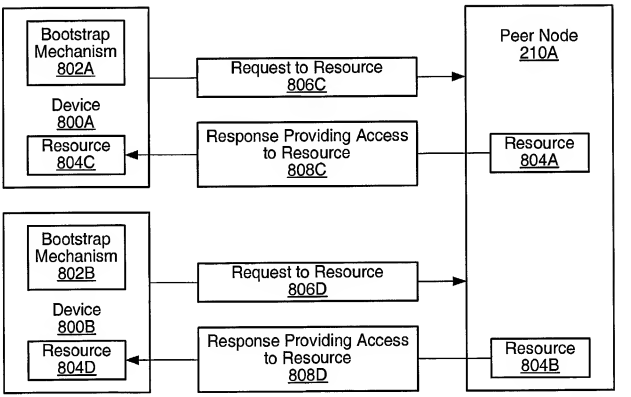

FIG. 30

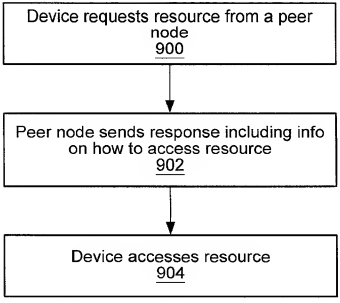

FIG. 31

20220164454